Passed March 9. 1829

University of Pennsylvania

An Inaugural Essay
On the Bilious Diseases which prevail
On the Rappahannock River,
Submitted to an examination
of the Medical Faculty,
by John A. Porter

of Virginia, For the Degree
of Doctor of Medicine

March 1829

In the following Essay I shall endeavour to present a faithful history of the bilious diseases which annually prevail in the section of country bordering on the Rappahannock River in Virginia. Taking into view the topography of this region, we are at no loss to determine the origin and source of our summer and autumnal Fevers, and of those Bilious inflammatory disorders which call for remedial aid during the winter and spring seasons of the year. Extensive marshes intersecting every part of this fertile country, present an immense surface for the combined action of heat and moisture, consequently producing miasmatic exhalations of a character, decidedly noxious to the animal economy. The system of agriculture that has been recently introduced, the leading feature of which is the exclusion

of the graging systems, and consequent fertilization of the soil, while it has enriched the landholder, and given an appearance of opulence to the face of the country, has tended to increase, in no small degree, our annual bills of mortality. The endemics of this climate bear with a greater degree of violence upon the African population, and those of the whites whose necessities compel them to labour in the marshy lands, and who are necessarily exposed to the alternate action of the oppressive sun and heavy dews of autumn. In this season an evident change takes place in the system; All the functions of the animal economy seem deranged.
A loss of appetite is the first monitor we have of approaching disease: Next come the morning sickness, and evening chill, untill finally a vomiting of bile, proclaims in language too

strong to be misunderstood, that the fever is at hand: An intermittent, if not soon relieved becomes a remittent. The treatment of the first is by gentle emetics followed by cathartics of calomel and other adjuvants; such as magnesia, oil, salts and senna. On the sulphate of quinine as a tonic we principally rely, given in doses every hour during the intermission. An active and prompt impression should be at once made upon the system, otherwise we may expect an obstinate intermittent for weeks, or it may be protracted for months; indeed it often assumes the shape of continued fever. Such is the common mode of treatment in simple intermittent of this section of country: there are some cases however which approach in such an appaling shape, that our utmost energies are required to overcome them. The cold stage is attended

by vast prostration of strength and every vital power: in this extremity we use the Camphorated emulsion and serpendaria with decided advantage; the stimulating applications, such as mustard seed cataplasms and warm embrocations, are here to be called in to our aid: Indeed without the most prompt and active administration of stimulating articles, both externally, and internally, no reaction will ensue, and we are destined to deplore the untimely death of the sufferer. I must here bear testimony to the unrivalled power of the mercurial preparations in the treatment of our autumnal diseases; and I boldly and unhesitatingly pronounce, that they are a sine qua non to the successful treatment of the diseases now under consideration. I shall enlarge more fully on the masterly effect of this agent, when I come to speak of —

Bilious Pleurisy, which we call our prevalent winter disease. It is by the judicious use of calomel, followed by tonic remedies, that we are enabled to rescue the patient from the sequelæ of this disease, Chronic hepatitis, Dropsies &c. &c. Many cases present frightful consequences, either of empirical practice, or unpardonable neglect; such are to be found among those, who have not observed the mercurial course, or who have withdrawn themselves, too early, from the use of invigorating remedies.

The Bilious Autumnal Remittent fever properly so called, is the next in order and may be considered second in violence. The cases of this disease, are generally of an unmixed character; that is, unattended with topical congestion or local determination. The hepatic organs may be here considered as primarily affected; the coated tongue,

the jaundiced eye, and the other symptoms denoting derangement of the animal machine, point with unerring certainty to the prevailing malady. We are now called upon in many cases, to encounter an obstinate, and very frequently a dangerous disease; and the first enquiry that suggests itself is the the therapeutic agent necessary for its cure. Where no local determination exists, we commence with the mercurial purgatives: Calomel alone, is in most cases, most advantageously employed. The irritability of stomach, which we sometimes meet with, is excessive, and no other remedy can be retained. I am of opinion that emetics so commonly prescribed are not well suited to our autumnal fevers: for the irritability of the stomach, a distressing symptom, exists in an increased degree after emetics

have been used. The purgatives most approved of after the mercurial are Rhubarb, salts, or oil, they assist the operation of the Calomel, and we prescribe them as auxiliary means only. In moderate cases of bilious fever, we find that it is unnecessary to carry the mercurial plan to the extent of salivation: indeed, we avoid such a result by evacuating the alimentary canal thoroughly, after each dose of the remedy. But some cases become obstinate and unyielding, and we are then satisfied, that the derangement of the biliary organs is such, as to require the mercurial impression. When such is the state of the system, we do not hesitate to employ the remedy perseveringly. The affection of the salivary glands is generally hailed as the best symptom of convalescence: It is frequently attended by a cessation of fever:

the tongue acquires its usual brightness, the eye its wonted lustre; and the appearance of the patient is indicative of a perfection in the state of the system.

I have before stated that we seldom see cases marked with local determination; but there are some exceptions to the rule, and these must be met with a different course of treatment. Violent delirium amounting almost to Phrenitis and distressing pain in the Epigastrium, or over the abdomen, denoting inflammation of the abdominal viscera, call for copious depletion with the lancet, and other auxiliary remedies: Epispastics to the whole head are sometimes required and cold applications have a happy effect in removing delirium, and calming the disturbed cerebral functions.

In the course of the treatment, while the

purgative effect is required there is no remedy better suited to the disease, than the combination of Calomel, Aloes, and Jalap; prescribed by Dr. Cooke, in his Journal essay on Epidemic fevers: the Rhubarb, as a substitute for the Jalap, would perhaps be a judicious change in the compound. It is less apt to excite nausea and vomiting; which is an unpleasant symptom, and sometimes very unmanageable.

The dark and fœtid evacuations certainly call for a continuance of the purgatives. Some caution is however necessary, to guard us against error in this state of things. We know that the secretions of the bowels are altered by certain agents which act chemically upon them: such is the effect of Calomel on the intestinal tube: the evacuations often assume a dark hue,

which is not the case when they are produced by other purgatives: A knowledge of this circumstance will prevent us from pushing the remedy too far, so as to produce copious ptyalism, an unpleasant, and in some cases, a hazardous remedy. The blue mass with aloes, in small doses, is serviceable in keeping up a constant and healthy biliary secretion, and in the closing stage of Bilious Fever, is advantageously used.

In this section of country, the Tonics are prescribed as soon as the proper evacuations are used. All the bitter Tonics are employed with benefit in the convalescent stage of our Autumnal Fever: The preference should, however be given to the Sulphate of Quinine, in well regulated doses. Where the nervous system has been affected, a combination of—

Camphor and Quinine is well calculated to restore its lost energies. The Eupatorium and Cornus Florida, of our forests, are much employed by Slave holders instead of the bark and its various preparations. —
In the practice of this region Practitioners make a limited use of what are denominated Febrifuge or Diaphoretic remedies.
As soon as the evacuating Plan has been used, there is a solution of the fever in most cases: In the after part of the treatment, when slight fever arises with hot skin, they resort to Sport. Nitr. Dulc. and — Blinder. Sport. The Antimonial powder of Rush is an efficacious remedy; but it most commonly acts as a purgative, and it is to the alterative effect of the Calomel it contains, that we attribute its beneficial result. In many cases there is so much

gastric distress that antimonials are entirely excluded. In closing my remarks on Bilious Autumnal Fever I am warranted in stating, that no such evil consequences have ever resulted, to persons treated on the Mercurial plan, as has been supposed by some. The power of prejudice against all innovations on the Old school Doctrines, and every thing in the growth of modern practice, has influenced in no small degree, the Oldest and at one period, the most extensive Practitioner on the Rappahannock. I allude to —
Dr. Somerville of Essex County Virginia. His imagination has conjured up "Gorgons, hydras, and chimeras dire," and fixed their existence in calomel and the lancet. Without the aid of these powerful remedies, he pretends to treat our Autumnal Bilious

Fevers, (all of which he calls nervous) Secundum artem, by the copious use of — Sal. Ammoniac, Laudanum, and Bark, Every case of Hepatitis, arising from badly cured fever, Obstructions of the liver with Jaundice &c. he easily accounts for; by laying it at the door of that all destroying Poison Calomel. Such a practice as would inevitably follow — from the adoption of this opinion, fortunately finds no advocates here; for if such were the case, most of those who have been spared to praise the virtues of the mercurial plan of treatment, would have long since, been "gathered unto their fathers". It can be safely asserted that the cases of Hepatitis on the Rappahannock River are as few — as in any other miasmatic country; and it is equally certain that they are

not produced by the use, or abuse, but by the neglect of the mercurial remedy in Autumnal Fever —

I can next to make a few observations on an our winter disease called Bilious Pleurisy. The Onset of this affection is generally marked with a dry, troublesome cough, small and difficult expectoration, quick and frequent pulse, constant watching, great anxiety of countenance &c.

Bleedletting in this form of the disease would be manifestly injurious, and greatly tend to hurry the fatal termination, which often happens on the fourth or fifth day, unless it has been employed. This disease is best characterized by the various symptoms indicating bile in the primæ viæ; the patient having in the preceding autumn been affected with the fall fever. When called

to a patient with Bilious Pleurisy, the first thing to be done is to evacuate the stomach; the tartarized antimony combined with Ipecacuanha in the proportions of one or two grains of the former to fifteen of the latter, constitutes a very good emetic. The next indication to be fulfilled, is to evacuate the bile from the intestines; for this purpose the drastic cathartics are principally used, the most efficacious of which I have mentioned in my preceding observations on our bilious autumnal fever. Among this class of remedies, calomel stands preeminent, and it is on this invaluable medicine, in combination with some one of the vegitable cathartics, that we mainly rely. Its specific action on the abdominal viscera is always manifested; emulging the liver, and evacuating the dark

and vitiated matter lodged in the intestines.
The cause of irritation being removed by the continued action of the foregoing remedies, the pneumonic symptoms seldom fail to disappear, and the cure is completed by the exhibition of Dr. Rush's antimonial powder, with a view to its alterative effect, and the liberal use of tonics, one of the most valuable of which, is the Serpentaria, exhibited in infusion as well for its diaphoretic as tonic properties. It is a favourite remedy with Practitioners in this section of country. If the cough continues troublesome, too resort to expectorants. A saturated decoction of the Polygala Senega when the inflammatory symptoms have subsided, is a valuable medicine. This is the manner in which the disease generally

terminates, but a remarkable circumstance sometimes occurring, deserves to be mentioned.

In the beginning the inflammation of the pleura is generally symptomatic, depending for the most part on the vitiated secretions, but as soon as purgatives are administered, and a copious secretion of bile ensues, a sudden metastasis takes place, the inflammation falling upon the lungs, and producing all the symptoms of acute pneumonia. Our treatment in this stage of the disease is widely different from what it was in the commencement. The lancet is now to be used, and the bleeding to be repeated as often as the situation and strength of the patient will admit of it; this evacuation being premised, and the ordinary treatment of pneumonia

pursued, the unfavorable symptoms generally subside, and the cure is completed. But not unfrequently the disease assumes a typhoid character, which I think might be called Pneumonia Biliosa typhoidea. This form of the disease makes its appearance with a small thread like pulse, and delirium, great prostration of strength, furred tongue, and in some cases total deafness.
Our object is now to support the strength of the patient by the exhibition of stimuli. The camphorated emulsion, bark, and serpentaria are now to be liberally used. Camphor is prefered to ammonia, by most of our Practitioners and it seems better suited to our winter diseases than the latter article. I have also the high authority of Professor Chapman in recommending this medicine: in his Therapeutics he speaks in the most

favourable terms of its efficacy in the typhoid state of fever. Dovers powder at night is an excellent anodyne and diaphoretic and should not be omitted: purging at this period is totally prohibited, in consequence of its tendency to debilitate the patient; blisters are absolutely necessary, and should be frequently repeated; In cases where the cough is troublesome, and expectoration difficult, a combination of Camphor and Gum ammoniac with nitre, is a good expectorant: In this form of disease as well as the preceding, the use of the mercurial alterative medicine is urgently required. A derangement of the hepatic organs is plainly indicated and calls for the appropriate specific: Calomel in minute doses, is generally prescribed, and used frequently to the extent of salivation, with

decided advantage. In the exhibition of Stimuli also Practitioners do not restrict themselves to the use of camphor, bark &c: They resort to Wine, Brandy, and Alkohol, to which cider, so highly recommended by Professor Chapman in his clinical lectures, might be added with propriety.

Such is the most approved plan of treatment of the Bilious Diseases of this section of country. Anomalous cases sometimes arise which require a modification of the course here laid down: In these the judgement of the Practioner must be his guide. By a proper observance of the mercurial plan of treatment, and a vigorous use of Tonics, Practitioners have seldom to contend with the tedious and destructive consequences of our Bilious Disorders which otherwise would prostrate the healthy functions of the system, and carry the patient to an untimely Grave.